

REMARKS

This application is amended in a manner to place it in condition for allowance at the time of the next Official Action.

Claims 24 and 29 are amended. Support for the amended claim language may be found, for example, at page 8, lines 1-2 and 25-29 and page 9, lines 25-29.

Claims 32 and 45 are canceled.

Claims 24-31, 33-44 and 46 remain pending in the application.

The present specification is amended at page 9 to correct a formal matter raised in the Official Action, i.e., an alkenyl or alkynyl chain requires at least two carbon atoms. Accordingly, the specification is amended to recite that these chains comprise "from 2 to 30 carbon atoms" instead of "from 1 to 30 carbon atoms". It is believed that this amendment to the specification does not introduce new matter, as one of ordinary skill in the art would have recognized that alkenyl or alkynyl chains include at least two carbon atoms.

The Official Action rejects claim 45 under 35 USC 101 because the claim recited a use without process steps. This rejection is moot, as claim 45 is canceled.

Claims 33-34 were rejected under 35 USC 112, first paragraph, for not complying with the written description requirement. This rejection is respectfully traversed.

In the scope of the instant invention, applicants have discovered a process which permits obtaining very specific pigment compositions including Al flakes. These compositions exhibit the following properties (see page 4, second paragraph):

- optical properties at least comparable to those of compositions obtained according to the "Hall" method (The "Hall" method consists in a wet milling process as defined in paragraph 2 of the specification wherein Al particles are deformed in the presence of a fatty acid such as oleic or stearic acid).

- a very good resistance to corrosion, especially with regard to water.

Applicants have determined that these properties are obtained when Al particles are deformed in the presence of silanes carrying hydrocarbon chains (typically by carrying out a process similar to the "Hall" method, but by substituting fatty acids by silanes as defined in claim 33).

Applicants have established that pigment compositions obtained in these conditions have the following advantages, especially when the protection layer is exclusively composed of hydrocarbon chain R as defined in claim 1:

- a very good optical quality, which at least partially results from a low thickness of the oxidation layer present on the obtained Al flakes (this thickness is of less than 5 nm),

- an efficient protective coating on the Al flakes, which ensures a sustainable protection against corrosion (due to hydrocarbon chain covalently bonded on the flakes).

Thus, the step of deforming the Al particles in the presence of silanes carrying hydrocarbon chains that results in the specific combination of advantages as discussed above, and the claimed invention is believed to be supported by the present specification.

Therefore, withdrawal of the rejection is respectfully requested.

Claims 29 and 45 are rejected under 35 USC 112, second paragraph, as being indefinite.

Claim 45 is canceled.

With respect to claim 29, the claim is amended to recite "from 2 to 30 carbons". Thus, claim 29 is consistent with the meaning of alkenyl or alkynyl group.

Therefore, withdrawal of the rejection is respectfully requested.

Claims 24-32 and 46 are rejected under 35 USC 102(b) as being anticipated by VAN OOIJ et al. ("VAN OOIJ"). This rejection is respectfully traversed.

VAN OOIJ fails to disclose a pigment composition matching the composition of claim 24, namely a composition which is (1) free of any fatty acid or salt thereof and (2) which includes Al flakes having:

- an oxidation layer thickness of less than 5 mm;
- a protective layer exclusively consisting in hydrocarbon chains R covalently bonded on the particles.

Indeed, VAN OOIJ does not disclose composition including Al particles, but Al macroscopic plates. Moreover, there is no mention of a mechanical deformation of these Al objects during the treatment. Hence, VAN OOIJ does not disclose a process according to claim 33 and therefore does not provide the means for obtaining a composition as defined in claim 24.

Therefore, withdrawal of the rejection is respectfully requested.

Claims 25-32 and 46 are rejected under 35 USC 103(a) as being unpatentable over VAN OOIJ. This rejection is respectfully traversed.

As discussed above, VAN OOIJ fails to disclose a composition as claimed in independent claim 24, and VAN OOIJ fails to disclose a method of forming such composition as recited in claim 33. Indeed, VAN OOIJ fails to even suggest the claimed composition, as VAN OOIJ solely discloses Al macroscopic plates, and the process disclosed by VAN OOIJ does not include a mechanical deforming step for these Al objects during treatment. Thus, VAN OOIJ cannot suggest the good optical properties and high resistance to corrosion as obtained by the claimed invention, and VAN OOIJ cannot render obvious claims 25-32 and 46.

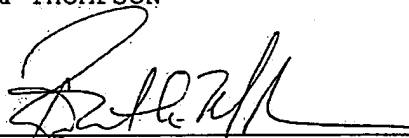
Therefore, withdrawal of the rejection is respectfully requested.

In view of the amendments to the claims and the foregoing Remarks, this application is in condition for allowance at the time of the next Official Action. Allowance and passage to issue on that basis is respectfully requested.

The Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 25-0120 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17.

Respectfully submitted,

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